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Agricultural.

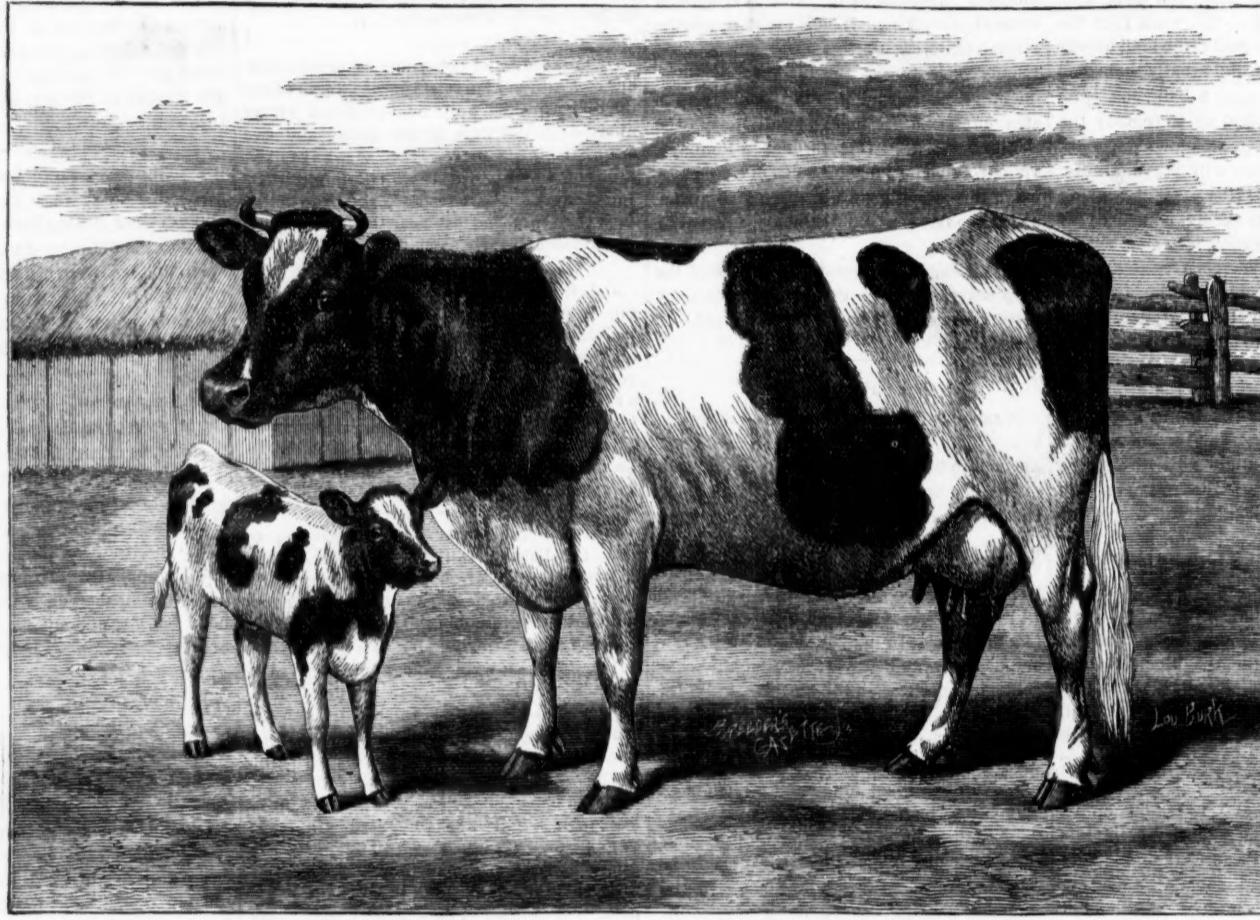
NOTES BY THE WAY.

The Country along the line of the Detroit & Bay City R.R.—The Agriculturist taking the Place of the Lumberman.—The Stock Farms of Bay County.—Herefords and Holsteins—Friesians Supplanting the Scrub.

The section of country traversed by the Bay City branch of the Michigan Central railroad, between Detroit and Bay City, is probably as well calculated to furnish an object lesson in the history of the State as any which could be selected.

Leaving Detroit and running through the flat lands which are found in this section of Wayne County, thence to the lighter lands of Southern Macomb, with its fine farms, through one of the richest portions of Oakland Co., which lies between Rochester and Oxford, with its rolling land, beautiful lakes, fine orchards, well stocked farms, we reach Lapeer, where the soil is of mixed character, and the heavy pine forests which once covered it were mixed with hardwood, and the lands change from a loamy sand to a stiff clay, with nearly all varieties of soil intervening. Then comes eastern Genesee, where remains of lumbering camps are yet to be seen slowly decaying, and the farmer is diligently at work clearing up farms and building homes in what was lately a wilderness. Between Columbiaville and Otter Lake, two well built towns the former so graphically described a week ago by "Old Genesee," we see acres of bare pines ruined by fire, while on the margin of those forbidding woods can be found as finely cultivated farms and as pleasant homes as one could wish for. Here and there stands an old mill, silent, with nothing but piles of sawdust and shavings to tell of its former activity. Then we come to Tuscola County, where the forests are yet in the ascendancy except where the settlers have hewed out sites of such active, bustling places as Millington and Vassar. Here also the agriculturist is surely extending his sway, and pushing back the forest to make room for farms, and grain is becoming the staple product instead of lumber. The work of clearing off those farms must be laborious and costly, but it is proceeding with great rapidity when the obstacles to be encountered are considered. At Reeds we enter upon the level lands of the great Saginaw Valley, and soon reach Bay City, with its broad streets, well paved, clean, and built up with stately business blocks and handsome residences. That city has many points of resemblance to Detroit, and its citizens are showing both enterprise and good taste in the manner in which they are building up and beautifying it. A ride out Central Avenue will put a resident of Detroit in mind of Woodward Avenue, in its beautiful shade trees, fine residences and the handsome grounds surrounding them. This avenue runs along a public park of 20 acres, which is being improved so that in a few years it will be one of the points of interest for all visitors, as well as a constant source of pleasure to us.

But the object of our visit was not to see the city but rather the country surrounding it, and on Tuesday morning there had assembled at the wholesale grocery house of Merrill & Field a number of gentlemen who were interested more or less in agricultural and stock-breeding, who were ready for a day's outing and a visit to some of the farms in the vicinity. Among the party were the two partners, H. P. Merrill and Eugene Field, Mr. Chatfield, President of the Bay County Agricultural Society, Judge Marston, who divides his allegiance between Detroit and Bay City, Wm. Westover, banker, lumberman and farmer (he carries on the two former to enable him to pay the bills of the latter), E. R. Phillips, now at the head of the Bay County Milk Association, Mr. A. McDonnell, lawyer and farmer, who thinks he can afford to farm as long as his practice is good, Mr. Ingersoll, a



Nierops Netherland No. 1421 H. F. H. B., the Property of Buchanan Bros., Chicago.

business man who is suspected of having some agricultural leanings, but is too modest to mention them, John Welch, once a leading citizen of East Saginaw, but who seems to be thoroughly at home in Bay City, lumberman and farmer, with a taste for Herefords and a good roaster, Mr. Cliff, banker, and last but not least, Mr. Samuel J. Tomlinson, formerly of Lapeer, afterwards of Detroit, newspaper man, who once controlled the Detroit Journal, and is now the owner of the Bay City Tribune, and the scribe who represents the FARMER when a quiet man is wanted who can listen rather than talk. The latter picture will be recognized at a glance. When the carriages were all loaded up the procession was put under command of Field Marshall Merrill, and it started across one of those fine iron swing bridges which span the Saginaw, and connect West Bay City with Bay City proper. Thence the route was out one of those famous stone roads which have been of incalculable benefit to the business of Bay City and the farmers who live about them. The farm of Merrill & Field was first reached, and here the party found something worth looking in the magnificent lot of Herefords which have made their owners famous among the stock-breeders of the country. The herd now consists of about 60 head of all ages, some 40 head having been sold since January. The two stock bulls, Tom Wilton 25357, and Clarence 23025, are in fine shape, and the latter having broadened out and matured within the past year until he is a grand specimen of the breed. His back and loin are wonderful, and through the heart he could not be better. Behind he is exceptionally strong, his twist being let down nearly to his hocks, and he stands as square on his feet as a steer. His calves are very even, and a bull calf three months old, out of the famous Greenhorn, and sired by him, is a model. Tom Wilton never looked better, and as he is now in his matured form he fills the eye and presents the appearance of a typical beef animal. There are some young heifers in the herd from him which, if put in the show ring, will neither disgrace him nor their breeders. The cows were all at pasture, the young calves running with them, and when they were driven up in a bunch, were as fine a sight as the most enthusiastic Hereford man could wish for. There was Lovely, as smooth and handsome as ever Greenhorn, with a wealth of flesh and as smooth as when a yearling. But we cannot particularize, as nearly every one would have to be mentioned. It is only right to say, however, that we believe there is not a herd of Herefords in the Union which can show as many good ones for its numbers, as can this one. And the young things are in every way worthy of the herd. It shows that Michigan, with equal chances, can grow as fine cattle as are to be found in the world.

It was the intention to visit a number of other farms, but some of the members of the party were recalled business unexpectedly, and Judge Marston had to leave for Detroit in answer to repeated telegrams, and exchange the pleasures of Riverside for the worry of the law.

The route was then down to the Kawawlin River; opposite the town of that name, and on the banks of which, some two miles up, is the farm of Mr. McDonnell. The party did not have time to visit it, but turned east along the bank, struck another of the stone roads and landed safely in the grove surrounding Judge Marston's residence at Riverside. The day was warm, but the Jersey milk was both rich and cool. A few minutes' rest was taken, and then the party started for the pasture to see the herd of Jerseys which are the most important part of the farm. The Judge is changing the breeding of the cows so as to have them come in the early fall, and thus be in good shape for the production of butter when it is bringing the best price. Hence most of

Rowland G. Hazard, the well known Rhode Island woolen manufacturer, died at his home in Peace Dale, R. I., on Sunday, June 24, aged eighty-seven years.

NOTES FROM THE FARM.

Harvesting began here as early as the 5th on the early varieties, such as Fultz and Velvet Chaff, and has continued uninterrupted since Monday noon. The early part of that day was rainy, but cleared off so that harvesters were clinging in every direction by the middle of the afternoon. Wheat will all be in shock and some drawn, if the weather continues fair the remainder of the week. The crop is fully up to the average of good years, and the quality is excellent. Clawson is fast losing its popularity, and is being supplanted by Velvet Chaff and Australian White. The milling qualities of these two kinds are equal to any white wheat ever grown. I noticed that the millers in convention last winter at Grand Rapids again uttered a protest against Clawson as a milling wheat, and added Fultz to the list of banner varieties. Farmers, I think, ought to consider such opinions as having weight, and make every effort to raise the standard of white wheat flour by growing such kinds as will stand the highest test. The reputation of the State for growing a high quality of white wheat can be sustained in no other way. Milling is the only sure test of value of a kind, and millers are the only judges. Farmers who have not been minutely informed have no adequate ideas of the exactness to which milling has been carried. Millers must all be experts in testing flour which goes on the general market. If it is not up to grade, off goes the profit. Every barrel will not stand inspection according to sample furnished by the dealer or sent by the miller. It must go in the next grade low, and receive the price for that grade. If wheat is purchased and ground, which is of such inferior quality as to lower the grade, it is a damage all around, both to the farmer as well as to the miller.

SALTED OATS AGAIN.

I have just come from the field of oats mentioned in last week's FARMER. It is nearly two weeks since my attention was first called to the experiment. To-day the dividing line can be found only by the stone on the fence corner, but when found a critical examination exposes the fact that the salted oats are farther advanced toward ripeness than the unsalted part of the field. But I believe there is no farther difference; the unsalted part being fully up in height, density, and in development of head. It is fair to state that the salted part is the poorest in quality of soil, so that any variation that may appear in the yield can be considered in the light of this fact. Conclusions have been jumped at, with a basis for the opinion no clearer than the facts already set forth, but the determination still fixed to carry the experiment to a final settlement. No person can tell to-day, or at any time while the crop is maturing, whether there are three to five bushels more or less in either part. But the crop is in good hands and although I have not consulted him about making his name public, I will venture to risk his modesty and say Mr. E. B. Welch is the man to whom the public will be indebted for this experiment, which will answer the question so far as this one experiment goes as to the value of salt in agriculture. There is already one mark in its favor. While other fields were scattering dust with the wind from their surfaces, the particles in this field lay perfectly quiet—the earth kept too moist to allow the wind to get hold of it. I still adhere to the theory expressed in last FARMER, to account for the very unlike appearance at my first visit, and the status of the growing crop this morning strengthens my position; but I shall faithfully record the outcome whatever it is.

ROWLAND G. HAZARD, the well known Rhode Island woolen manufacturer, died at his home in Peace Dale, R. I., on Sunday, June 24, aged eighty-seven years.

Who has seen any indication of the ravages of the Hessian Fly this year? I have

not seen a crooked straw yet, but cutworms have never made such havoc with crops before. Early sown millet has in several instances been swept clean from the ground. They have at last taken to themselves wings and are hiding in every crevice biding their time to furnish us next year's supply. The seasons are so unlike—last season compared with this—that it is to be hoped that no such favorable opportunity will be given them to deposit their eggs again. A dried sprig of grass blade, or a stem of a plant, furnished brackets enough upon which last year's crop of moths hung their several sachets of promise, while not a green blade of volunteer wheat so necessary to fly could be found for a resting place, and so one vast army of predators perished, and the other survived even to the last one, seemingly. I suppose there can be vicissitudes of weather, such as will thwart the best laid plans of these waiting moths. Farmers who have not been minutely informed have no adequate ideas of the exactness to which milling has been carried. Millers must all be experts in testing flour which goes on the general market. If it is not up to grade, off goes the profit. Every barrel will not stand inspection according to sample furnished by the dealer or sent by the miller. It must go in the next grade low, and receive the price for that grade. If wheat is purchased and ground, which is of such inferior quality as to lower the grade, it is a damage all around, both to the farmer as well as to the miller.

Where are the bumble bees? And consequently how will the clover blossoms become fertilized? The bees are certainly a short crop, and doubtless clover will be but I shall not couple the one fact with the other, and say no bees no clover. If what clover there may be will be well, other insects must merit the good will of those who believe in their kindly offices. I don't believe nature cares to risk the chance of seed on such precarious grounds. Bumble-bees may sometime depart as suddenly as the tent caterpillar from our orchards but we shall have clover seed nevertheless.

A. C. G.

OUR illustration in this issue is a beautiful picture of Nierops Netherland, No. 1421 H. F. H. B., calved June 8th, 1885. His sire is the famous bull Netherland Duke, 1571 H. H. B., who is a son of Lady Netherland 1265 H. H. B., who was one of the original foundation stock from which have grown the entire Netherland family. She is also the dam of Netherland Prince, Prince of Edan 1070 H. H. B. is his grand sire; he was a great prize winner, being a beautiful bull. On the side of his dam, Nierops Netherland is equally well backed. Nierops was sold at auction for \$320 cash, at the closing sale of Carey R. Smith, at Iowa City, and went to New York State. She was one of the handsomest animals in the herd as well as best milkers, having milked 60 lbs. in one day on grass. Nierops Netherland looks considerably like his dam, being fine in handling, of good length and size. He is a sure breeder of bright, healthy, active calves, and has the breeding and milk qualities to any herd in the northwest. Buchanan Brothers, 225 Dearborn Street, Chicago, advertise their entire herd for sale at auction. Nierops Netherland and many of his calves are included in the catalogue which they publish, and are pleased to mail to all who may write them.

W. L. GLASSNER, Commissioner of the Bureau of Immigration, writes under date of July 2d: "I desire to exhibit at your next State Fair a display of the agricultural, mineral and manufacturing resources of the State of Georgia, and for that purpose would like to secure from 1,000 to 1,500 square feet of space in one of your halls. The exhibit will be put up in an attractive style. It will be transported in a handsomely decorated car built especially for this purpose. It is not our desire to enter for any premiums."

AUSTRALIA exported 22,379 bales of wool to the United States last year, the largest total ever so shipped. The average of the past eighteen years has been 10,829 bales, and every pound of it has taken the place of a pound of American wool.

AMERICAN WOOL.

Where it is Grown, and the Relative Amounts of Various Grades Produced.

As the variety and quantities of each variety of wool grown in the United States are very frequently subjects of controversy, and, we may say, of the most surprising assertions on the part of those discussing the question of the value of the present tariff on wool to wool-growers, we give the following statement from J. R. Dodge, statistician of the Department of Agriculture, on these points.

The first of the three classes is clothing wool. This is the fleece of full-blood and grade Merino, of fine, short fiber, remarkable for its felting quality. These wools are prepared for manufacture by carding rather than combing. The highest type of this race, the registered thoroughbred, is found in Vermont, where breeding flocks are more numerous than elsewhere, and in considerable numbers in Western New York, Ohio and Michigan, and scattered through the western States.

The Merino type of wools prevails almost exclusively in the three States named, in Texas, and throughout the Rocky Mountains and Pacific Coast areas. Few sheep of other blood are found west of the Missouri River.

Western Pennsylvania and West Virginia furnish wool of the Merino type mainly. The seaboard States of New England also furnish some grade wools of this type.

The second class, the combing wool of the tariff classification, includes the medium and long wools of the English breeds, the Cotswold, Leicester, Lincoln, several varieties of Downs, and other breeds of long and coarse wool, also popularly known as the mutton breeds. These are few in number compared with the Merino type. Nearly all the sheep of the south, exclusive of Texas, are of this class, mostly descendants of the less improved English sheep of a hundred years ago, with occasional infusions of better blood from England, Canada, or the northern states. In Kentucky probably 99 per cent. are of the combing-wool class. A considerably proportion, too, are highly improved, giving to this State the reputation of having a larger proportion of high-quality mutton sheep than any other State.

In the vicinity of the Atlantic cities, from Maine to Virginia, sheep husbandry is principally lamb production, the males being Downs or other English breeds, and the ewes grades of both the Merino and the English types. This combination produces a mixed wool of a useful character. Then there are considerable numbers of the English breeds, though fewer than Merino, scattered through the western States, from Ohio to Kansas, and a still smaller proportion on the Pacific coast and in the Territories.

As to the third class, the carpet wools, they are represented in the United States only by the Mexican sheep, which are the foundation of a large proportion of the range flocks, but so improved by repeated crosses as to furnish wool of the Merino type, much of it of high grade.

It is also stated that the carpet-wool product of the United States is almost exclusively the fleece of sheep of Mexican origin, which are raised chiefly in Texas, New Mexico, Arizona, and certain other territories of the mountain region of the country situated between the Mississippi Valley and the Pacific Slope.

The imports of combing wool into the United States are chiefly English long wool, which enters into competition with the domestic or combing Merino wool produced in this country.

As to relative quantity of clothing, combing, and carpet wools, respectively, produced in the United States, Mr. James Lynch, of New York, a recognized authority on wool statistics, states, under date of September 23, 1887, as follows:

You want estimates on the respective amounts of clothing, combing and carpet wool in the United States of 1886. If you will refer to my last annual circular you will find my estimate of the total wool clip of the United States to be as follows in points, viz:

Low Bluff, Minnesota, and States east of the Mississippi, except Lower South	160,000,000
California and Other Western States and Territories	40,300,000
Colorado and New Mexico	24,000,000
Texas, Lake, and Southern	26,000,000
Georgia, Lake, and Southern	16,000,000

Total 328,300,000

With the improved combing machinery now in use, nearly all of the first mentioned 160,000,000 pounds could be passed through the combs, and so also could a small portion of the 40,300,000 pounds of California, and perhaps five-eighths of the 56,000,000 pounds of Oregon and other States and Territories. A good deal of the 24,000,000 pounds of wool from Colorado and New Mexico can be combed, but very little use is made of it for that purpose. There is a small portion of the 26,000,000 pounds of Texas and the 16,000,000 pounds of Southern that could be combed, but hardly any of it is used.

All the wool can be used for clothing purposes, barring a trifling quantity of hairy and kinky, which comes chiefly from Colorado, New Mexico, and Texas.

It may be said that the coarse wool from any section may be used for carpets, and rules to regulate the price of our products, farming can not be made successful. It is not the amount we sell, but the price we get over the cost of production. Then is not a rule showing how to dispose of at a profit, and to secure just rights, and showing us our true position, just as necessary to suc-

cessful wool-growing?

A considerable portion of the wool product of this country which, according to the tariff now in force, is classed as clothing wool has, by comparatively recent improvements in machinery, been rendered susceptible to the combing process, and thus has been utilized in the manufacture of worsted goods, embracing certain higher grades of wearing apparel, women's and children's dress goods, as well as fabrics for men's clothing. Such wools, though in the trade regarded as combing wools, under the terms of the revenue-law tariff, would be classed as clothing wools.

It will be seen that Mr. Dodge very clearly endorses what the MICHIGAN FARMER has repeatedly printed on this subject; and that the statement that all kinds of wool needed in manufacturing, can be, and are, grown in this country is correct, although from the improvement of the flocks, very little carpet wool is now produced, nor would it be worth while growing it, when higher grades can be produced. In this connection we may say that Frank Hurd and our worthy contemporary, the Adrian Press, may learn several things from this article if they will give it a little attention.

UNION FARMERS' CLUB PICNIC.

The Union Farmers' Club picnic at Eagle's Point, Jackson Co., on July 4th was well attended, members from nearly all the surrounding clubs being present. The Point is a pleasant resort, and Mr. Beach a most genial proprietor.

The Horse.

Dates of Trotting Meetings in Michigan for 1888.

Saginaw.....	July 17 to 20
Detroit.....	July 24 to 27
Detroit.....	Sept. 4 to 8
Cantonville.....	Sept. 18 to 21
Lansing.....	Sept. 24 to 26

Horse Talk.

A New York correspondent of the *Rural New Yorker* makes some good suggestions about farm horses in the following:

"In selecting a horse for the farm, there are more points to be considered than for any other use. We must have a horse that is a fast walker, as walking is the gait most used on the farm, and a horse that will walk four miles an hour will do just double the work that one that will walk only two miles does. At the same time it should be of a make that will bear driving faster than a walk, say at the rate of eight miles an hour. He should be kind and not high-spirited, as it is often desirable for children and persons of inexperience to handle him, and it is necessary to have a team that will stand quietly and not be easily frightened when left alone. A farm horse should possess intelligence, for an intelligent horse will save a man many steps.

"On a farm where stock is kept, or on any farm except some near a city where gardening is carried on, it always pays to raise one's own horses and have some to sell. If one wants to buy a farm team he can get a better selection in Canada and less money than in this country.

"I want a snug-built horse, an easy keeper, weighing about 1,100 to 1,200 pounds, of bay or black color. Every farm that employs two men should have at least three horses. The farm team should consist of breeding mares; then by having one mare foal about the middle of May and the other about four weeks later, breeding will not interfere with the farm work to any extent. The third horse should be a good carriage horse, and one that will take the place of one of the others when necessary. His weight should be 1,000 pounds.

"I do not consider it profitable for a farmer to make it a business to raise horses unless he is an experienced horseman; but by good management: the farm team should raise a span of colts nearly every year with good profit. Farmers should aim to raise farm horses, for a good team, as before described, will bring from \$300 to \$400 when five years old. Good horses, if successful, can make more money by raising carriage horses, for a good span of good horses of that kind bring, when from five to seven years old, from \$1,000 to \$2,000, but they must have lots of care and handling and be never put to work. The Hambletonians take the lead for this. The first class of horses that are adapted to farm work, find a ready home market, and if they attain a weight too heavy for the farm, they will find a market in any city. The latter class find the best market in New York City.

"The cost of raising a colt the first four months is nothing, except the loss of the use of the mare for a few weeks. When weaned the colts should be fed a few oats until grass comes the next spring. Feed just enough to keep them in a thriving condition; it is better not to wean them until they are six months old. A warm shed where colts can run at large is the best for them; if they are old enough to break, which should be done when colts are three years old. The colts I have spoken of are easy to break and any one with a little care can handle them. The cost of raising a colt is about the same as that of raising a steer. My motto is not to let a horse tax colt. I feed and water regularly; do not feed too heavily; rather often; let them run out in the pasture as much as possible during the summer months; and I always have healthy horses. I never use horses when they do not act well and they generally are all right in a few days. For colts, etc., on feet smear with hot tar."

Canada Chucks.

An American dealer in horses recently advertised a car-load of "Canada chucks" for sale. This inelegant but rather expressive term denotes a class of Canadian horses that usually finds ready sale with Western buyers. They are as a rule the result of a cross of cut stallion upon the ordinary mares of the country, and there can be no doubt that in times past Canadian farmers have made considerable money out of their production. They are generally easy-tempered, heavy feeders and vigorous workers. Like nearly all horses bred in this country, they are tough and healthy and not liable to go wrong in any climate. There is, however, one very serious objection to their production, and that is that they are the result of breeding down rather than up. The toughness of these horses is, as a rule, inherited from their dams, while their weight generally comes from their sires. While Canada had regiments of regular soldiers stationed throughout the country, the supply of warm-blooded mares was always well maintained. Well-bred mares that had been imported by the officers for chargers were continually finding their way into the hands of the farmers who used them as brood mares, and the result is that in the bottom crosses of many of our oldest families of Canadian horses there was a large infusion of the blood of the thoroughbred. This gave to our horses a leaven of fine texture, but bone, small clean sinews, and no small degree of quality in outline, besides courage and intelligence. This was our capital, so to speak, and nothing better could have been had to start with. The question is, however, have we made the best use of this capital which circumstances placed in our hands? Had we gone on keeping up the standard of excellence from the time referred to, it is not improbable that Canada would to-day have been second to no country on the face of the globe in the matter of her average of good marketable horses. As it is, however, we have been making continuous draughts upon the leaven of excellence left in our hands by the casting of military mares in our country where the climatic conditions are so favorable to the breeding of sound, healthy horses. Instead of going ahead and building up a well-nigh unapproachable breed of useful horses upon the excellent foundation accidentally furnished us, we

began at once to draw upon our capital by breeding down instead of up. By the use of big, coarse, flabby-muscled, brashy-boned, flat-footed stallions, we began at once to dilute the good qualities of our brood mares, securing more bulk and less excellence. The first cross, though a step downward, could not but result favorably from a financial point of view, for it produced a generation of animals combining to a considerable extent the excellencies of the dam with the bulk of the sire. But this cross also resulted in having a deteriorated lot of blood mares in the country, and each succeeding cross has gone on making matters worse, till, as a matter of fact, it is now a troublesome task to obtain a good brood mare in Canada at anything like a reasonable price. In the Western markets "Canadian chunks" still sell readily on account of the reputation they established for themselves generations ago, but they have cost us a retrogression in the general character of our horses from which only a persistent and general employment of thoroughbred sires will enable us to recover.—*Toronto Globe*.

Horse Gossip.

ONLY 15 HORSES have yet got a record of 2:15 or under, and the number is not being added to very fast.

HARRY WILKES, Rosalie Wilkes, and the pacer Gossip Jr., will be at the Saginaw meeting the coming week.

THE Chicago stable, Hankins & Campbell proprietors, is said to have lost 17 races and \$15,000 in cash before winning one at the Chicago meeting.

THE Michigan bred horse Silver Cloud won the 2:33 race at Marshalltown, Ia., June 29, in 2:34½, 2:30, 2:30. Silver Cloud is by Mambo Chieft, dax by Magna Charta.

JAY-EYE SKE had a bad cut made in the muscles of one of his fore-legs by a barb-wire fence recently, while running in his paddock. It strikes us as a singular error of judgment for any one to use barb-wire to enclose a paddock for ordinary horses to run in.

It seems as if stories regarding the sharp practices of drivers which frequently appear in journals devoted largely to racing, should relate them to private life as dishonest knaves rather than add to their popularity, as appears to be the case from the way in which they are told.

COLLES COUNTY, Ill., can safely lay claim to the fact of having the largest horse in the world. John Rall, residing at Redmon, owns a horse 20 hands high, that weighs 2,500 lbs. It is five years old, never has been "broken," and has never been off his farm.

A SON of Fearnought Jr., owned at Coldwater, started in the 2:18 class at Janesville, Wis., at the recent meeting held there, but only got sixth place. The fastest heat was 2:19½. The horse is called Benny, and is a gelding. He is evidently over-clasped.

THE Jackson papers tell of a three-month-old colt, sired by Al Sultan, which can trot a dam to a break although she can do her mile in three minutes. But the world is full of phenomenals as colts, which are never heard of when matured. Perhaps this youngster may prove an exception.

At the Jackson races R. C. Van Meter, who drove the horse Faro in the 2:23 trot, was fined \$6.00 for purposely throwing the race by pulling Faro. All bets were declared off. He really ought to have been expelled, as the rules give the judges power to do this in such cases.

SECRETARY SMITH, of the Detroit Driving Club, under date of July 2, writes to *The Spirit of the Times* as follows: "Only 17 horses out of the sixty entered in the three colt stakes, to be trotted for during our fall meeting, failed to make good the second payement; nine in the J. L. Hudson Stake for two-year-olds; five in the Hotel Cadillac Stake for three-year-olds; three in the B. Stroh Brewing Co. Stake for four-year-olds."

DURING the last day of the Jackson meeting, the Michigan Breeders' Stakes for two-year-olds were trotted for. The entries were as follows: Master, b, s, owned by Ray Warner, Coldwater; Don M. Dickinson, ch, s, owned by J. D. Hibbard, Jackson; May S, b, m, owned by J. R. Cooper, Detroit; Grade, d, b, m, owned by F. D. Galbraith, Pontiac; Wapakoneta, r, s, owned by M. T. Hoyt, Battle Creek; Vendetta, b, m, owned by Wm. Van Putten, Holland. Master took the lead, was never beaten, and distanced the field in 2:24½.

SAYS our Paris correspondent: "An agriculturist draws attention to the manner some horses sleep, with their fore feet under their chest like cows. This very frequently produces the well-known ugly wort, or wen, on the point of the shoulder, due to the pressure on the cook of the shoe. Thick-skinned fleshed horses, escape the unightly corn better than thickeid ones. Bad bedding, pavement, or being too tightly tied up, can cause the animal to rest on its shoulders. But the cause may be internal, and Nature in its freaks takes the same spot for the deposition of the morbid principle of the disease. Often horses not having the respiratory organs in a normal condition, lie with their fore-feet under their chest, in order to keep the latter from the ground, and so facilitate respiration."

JUNEMONT, a son of Tremont, is the sensational young horse of the season. He is a chestnut stallion, bred and owned by John Carey, of Jackson, and is now five years old. He began the season at Columbus, Indiana, in the 2:40 class, and was shut out. He had the same success at Cambridge City, Ind. Then G. Grimes took him in charge, and shortly after he captured the 2:40 race at Dayton, O. At Lima he was second in the same class. His next appearance was at the Kalamazoo meeting, where he won, in the 2:35 class, trotting one heat in 2:31½. At the Jackson meeting he also captured the purse in the 2:35 class, best time 2:27, winning with ease. It is said his owner has offered \$10,000 for him, but refused to sell. We do not know his breeding on the dam's side, but his sire is as well bred as any trotting stallion in the State.

THE Legislature of Iowa has passed a law for the suppression of fraud on part of unscrupulous owners of stallions, or other entire animals, by means of fraudulent pedigree. By this law any owner or keeper of a stallion or bull for public service, who represents him to be a pure-bred or thoroughbred, or standard-bred, in the case of any breed of horses or cattle which has a stud or herd-book for registration of pedigrees, must place a copy of the certificate of registration on the door of the stable where the stallion or bull is usually kept, giving the number of registration, name of breeder, name of animal, and

volume or page of herd or stud-book, in which the animal is registered, and when requested to do so, he must give a copy of this certificate to any patron. Any keeper of a stallion or bull who shall violate the provisions of this law, shall be deemed guilty of a misdemeanor, and shall be punished accordingly. The law in this State is equally as stringent, while stallion owners are protected from loss by a law giving them a lien on the produce from their animals until they receive their pay for service.

The Farm.**Suggestions About Plowing.**

There are fewer good plowmen than formerly, and with this decline in workmanship, there is less interest taken to do creditable work. So much of the drudgery of farm labor is now done by horse and steam power, that all kinds of handwork are more or less neglected. The sulky plow on good ground does away with the necessity for skill in the plowman. But we think under many circumstances a man and team with good steel plow can do better work than the sulky arrangement, in which the man merely rides and drives. We find usually that when the sulky plow does make a balk, the team is rarely, if ever, backed up to remedy the mistake. Still, with poor plowmen, probably the automatic plow will prove an improvement on their practice.

The first plowing in spring is usually of corn stubble in preparation for some spring grain. In all the Northern States, corn stubbles are usually loosened by the frost, so that going over them with a forty-tooth harrow will tear them up, and in so doing the soil most admirably for the subsequent plowing. This breaks the crust, and can be done at the rate of six to ten acres per day, while two acres is a good day's work per plowman.

It is possible to increase the value of the crop several million dollars per annum by further selection and improvement of varieties.

HERE is the Arab test of a good horse, which every farmer can apply. It is simply to observe your horse when he is drinking out of a brook. If, in bringing down his head, he remains square without bending his limbs, he possesses strength, sureness, and all parts of his body are built symmetrically.

BUCKWHEAT is called the "lazy man's crop," because it is one of the easiest crops to grow; its seed costs even less than corn per acre, and it requires planting at a leisurely time, and will grow a good crop on land that is almost useless. It is generally a profitable crop, even giving good cultivation.

COOPS with chicks should stand on little knolls. During hard rains the water will sometimes stand in the coops and drown the birds if placed on or below the level of the surrounding ground.

WHEN chicks grow very fast it sometimes causes leg weakness, but in such cases they have good appetites, and it is not necessary to fatten. Bottom heat, or feeding sulphur, will also cause leg weakness.

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Horticultural.**Causes of the Degeneration of Fruits.**

Mr. O. B. Hulden, in a paper read before the Massachusetts Horticultural Society, thus treats the above subject:

The natural and artificial causes of the degeneration of fruits are but imperfectly understood, many sorts are subject to many various conditions, such as the natural hardness or longevity of the variety, the influence of the soil and climate, the stimulating effects of liberal cultivation, and the mysterious influence of grafting, both on stock and scion, which are all so clouded and obscure that we can neither comprehend nor explain them. Nevertheless, there are some facts that seem to throw a light on the subject. While perhaps it is utterly impossible to verify the causes that augment the degenerate tendencies of fruits, the facts are apparent, and although the evidence as to the cause is partially circumstantial it is yet unequivocal, and cannot well be set aside in communities where cultivation has been pursued for fifty years or more by "the art which does not mind nature."

The pear trees grown from seed which were planted by the earlier settlers of this country were of robust habit and growth, attaining large size and great age, and have outlived many generations of men, and while known as early as 1663, some are still alive. The pear is indigenous in sections of the temperate zone, flourishing as far north as 57°, and is grown in this country from the British Provinces to Mexico. In acclimating and growing the pear in a warmer climate its primitive habit of long life seems to lessen. Growers have abandoned planting the seeds from the original fruit, and have used the seeds of ungrafted fruits, which being more tender have bred into the pear tree a tendency to shorter life. Grafting and high cultivation, and also growing in impoverished soil, each has an influence in the direction of degeneracy, and the trees are evidently tending to earlier fruit age and shorter life. The almost universal practice of propagating desirable sorts by grafting, or budding, has undoubtedly the tendency to gradually but surely work a serious injury to some fruit-bearing trees. The tendency of continuously planting the seed of improved sorts is very much the same as what is known among cattle-growers as "breeding in and in," which, if long continued in the same line is a sure and constant cause of degeneration. Now, if the tree, from any cause, is losing its natural stamina and force, or becomes defective or diseased, the weakening of its natural functions very soon becomes manifest in the fruit.

The White Doyenne or St. Michael, in its day the glory of the pears, has now become wholly unworthy of cultivation. Sometimes it seems to recuperate in new countries and thrive in a virgin soil, but soon relapses into its normal condition. The Flemish Beauty is another illustration of degenerate tendency; it was brought into notice in 1884, and for many years was deemed one of the most valuable kinds, but it has now become unworthy of continued cultivation.

The catalogue of trees grown in the nursery of William Kenrick in 1888, is being then one of the most prominent nurseries in Massachusetts, contains in the class termed "old pears" twelve sorts, not one of which has been shown on the society's table for years. In the class of "new pears," containing eighty-seven sorts, we find only seventeen which are occasionally seen at our exhibitions and of those only four, the Bartlett, Bosc, Seckel and Aigouleme, are generally approved. In the list of new pears received in this country from Europe in the years in 1884 to 1886, consisting of 140 varieties, which been tried and most of them shown on our tables within the past forty years, there are but two that are now considered worthy of cultivation.

In the catalogue of Prince's nursery at Flushing, N. Y., for the year 1889, designating by name 387 varieties, there are but thirteen that are now seen on our tables. Then we are made aware that of the extensive variety of pears which were being brought into notice forty or fifty years ago—some 350 varieties—less than 20 are on our premium list for the present year, and 330 varieties have gone out of cultivation. In the meantime, many other sorts have been introduced, a considerable part of them seedlings of American origin, and out of this vast multitude, twenty-five varieties would be a large number to now estimate as worthy of the approval of this society.

It would be unfair to imply that all this very large number whose cultivation has been discontinued have degenerated. Doubtless many causes have had an influence—some were found poor growers; the fruit of many lacked the qualities essential in good pears; some seemed naturally disposed to blight and other disease; and many were unsuited to the soil and climate.

But it would appear (although difficult to prove) in regard to some sorts that were once esteemed for general cultivation, but have now degenerated, that the tree has already lived that time allotted by nature, and the existence of the fruit is only prolonged by nursing it in its unfertilized condition, or by grafting on vigorous stocks. This process opens another phase of the question, how long fruits can be continued by grafting or budding.

But it can easily be demonstrated that the natural life of the original pear tree is longer than that of several generations of men, and the life of the fruit can be prolonged to an extent that we know not of. There was formerly an adage, "He who plants pear trees for his heirs," but now he who plants pear trees gathers a crop in a few years, and the trees mature and die before the heirs are born.

The apple, grown from seed planted by the early settlers, was cultivated as early as 1663, and in many instances proved long-lived, reaching the age of two hundred years or more. These trees attained great size and bore immense crops of natural fruit. The essayist stated that he knows of apple trees still bearing good crops that have every appearance of being 150 years old, and of grafted apple trees more than sixty years old that are still productive and unimpaired. He also knew of one orchard, set forty-five years ago, which has received high cultivation, that has become old and worthless, having no force to make healthy wood or bear fruit, and he has read that apple or

chards in some of the northwestern States do not average more than twenty years in bearing.

The degeneration of the apple proceeds more slowly than that of the pear. Out of sixty varieties, mostly of American origin, cultivated fifty years ago, more than fifty are now grown and esteemed. It must be admitted that the apple is not only the most valuable fruit in this section of the country, but also long-lived and manifesting few signs of decay. The Early Harvest and the Newton Pippin seem to be on the wane, and a few more are tending in that direction. On the other hand the Rhode Island Greening, known in cultivation for 150 years, is seemingly as good as ever, both in tree and fruit, and promises to last for a long time. The Costard, one of the oldest apples grown in England, was recorded in the thirteenth century.

Among fruits that were formerly plentiful, the peach offers the best example of degenerate tendencies, seeming less able to withstand the departure from its normal condition by grafting and modern usage and the effect of climate than do others of the fruits. In former years the peach was exclusively grown from the stone, and grafting was not practiced; the trees were not only free from disease, but without the vicissitudes of climate and produced abundant crops; the ground within the memory of these present would be literally covered with luscious fruits, and the life of a peach tree was often fifty years, and by cutting back to the ground and allowing it to sprout, a much longer period. But when the nurseryman began to prolong the existence of approved varieties by budding, not many years elapsed before the loss of its original stamina and hardness became apparent, and by 1818 that destructive disease, the yellow, crept in, and was very soon contagious. This disease has continued in the northern sections of the country, and consequently peach-growing, always precarious, now seems utterly ruined.

The question of degeneration seems fairly settled in the peach tree, and the fruit follows the tree, and varieties have become lost. The question naturally arises—can the peach be restored? Evidently not until the budded trees are thoroughly extirpated, root and branch, and we must resort to the custom of our ancestors, of growing from the seed, which should be procured from sources where disease is unknown in any form. We may then hope for another period of healthy trees and luscious fruit with a reasonable degree of certainty. Many varieties of peaches reproduce their like from the pit; the fixed strains should be encouraged, and painstaking cultivators could impregnate the blossoms with pollen of good sorts, and by saving the stones would increase their chances of success in producing new and desirable varieties.

The cherry and the plum do not manifest a tendency to degenerate; they seem to be more subject to injury from insect enemies than to any apparent decay. Varieties grown by the earlier cultivators are still esteemed, manifesting, even under the influence of repeated grafting and artificial modes of cultivation, a decided tendency to long life. Methods of cultivation that seem to destroy the longevity of the pear and the peach apparently have little effect upon the cherry and plum, thus leaving the subject of degeneration in these involved in considerable doubt.

Among the small fruits, the strawberry furnishes the best evidence of duration of life, as nearly as can be ascertained, is about thirty years, although there are a few instances of longer duration, and some shorter. Of twenty sorts grown about fifty years ago, not one is known in cultivation, if we except the Alpine, which seems to be perpetual, as does also the wild native variety. Of fifty-one varieties grown in Prince's nursery in 1889, not one remains. The strawberry gradually becomes enfeebled and unproductive, and passes away, giving place to new and vigorous seedlings, which seem to be nature's mode of reproduction. Within the past forty years hundreds of varieties raised from seed have been brought into notice, and but few now extensively grown have been known to cultivators for twenty years.

Thinning Fruits.

The systematic thinning out of fruit has hardly received the attention it deserves, either at the hands of commercial growers or of amateurs. The former class particularly argue that in the case of large trees it is often impossible and that even when it can be done the time and labor expended bring no corresponding profit. I am inclined to think, however, that when intelligently practiced the thinning of fruit almost always pays and often pays large returns.

In favorable seasons some varieties of fruit set far more than the trees can fully develop and mature. In such cases natural or artificial thinning must be resorted to secure satisfactory results. The army of curiosities, codling moths, birds and fungi assist in this matter with great energy, but generally with little discrimination. And yet without their aid it must be confessed that the fruit-grower would often find thinning an imperative duty.

If half the crop of apples, pears or peaches on a tree were removed those remaining would frequently aggregate as much in bulk as the whole would if allowed to remain, and would probably yield as much money, to say nothing of the diminished labor of handling. Again, well-grown fruit meets a reader sale. Such pears as the Seckel, which grow in clusters, can be thinned with decided benefit, and perhaps it is the small varieties generally that pay the best for thinning, as increase of size is more readily appreciated in the smaller kinds. Apples and pears which incline to cluster, even in twos, are generally more defective, by reason of insect depredation, than those borne singly. The Beurre Bois is one of the latter kind and not prone to overbear, and if attacked by insects it is generally in the calyx. The Bartlett, when well set, is in pairs and triples, and the point of contact is generally the seat of insect operation. The early thinning of these clusters to single specimens, therefore, gives fair and larger fruit for the trouble. On the other hand, Marie Louise has never borne for me a fine flavored specimen except on a light crop; on a full crop, even when severely thinned, they attain cooking qualities only, which is even more than I can say of the Mount Vernon. Indeed, it is yet an un-solved problem with me whether the lightest kind of a crop of the latter would give me specimens of tolerable table quality.

Clairgeau are very prone to overbear here and thinning is an absolute necessity if their quality is to be brought about moderately.

Peaches can be fairly thinned by pruning the trees, which is the most feasible method. But when this is neglected and the trees are full set, the removal of half to two-thirds of the fruit, after the natural dropping is over, will be found beneficial, not only enhancing the size, quality and value of those remaining, but saving the tree from breaking down. With peaches it is size that tells, and the larger the peach the greater the proportion of flesh to stone. A friend in California writes that the peach trees there did not contain more than one-third as many as lay on the ground after the Chinamen had completed the work of thinning. With Chinese labor here, or his rate of wages, this question of profit in our large peach areas, with their enormous products, would still be a debatable one, and whether our markets would stand a sufficient advance in prices to compensate for the increased expense, is, to say the least, problematical.

Thinning strawberries is sometimes practiced to secure extraordinary berries for exhibition, but the only practical way to improve the quality of the crop is to thin the plants. If allowed to run in thick, matted rows they generally become too crowded for the best results, and many plants must, of necessity, become weak and unfruitful. No better evidence of this fact can be adduced than to compare the crop on plants grown in hills with the same number of plants in thick matted rows. The hill system means extra labor, it is true, but the improved quality of the crop will go far to compensate for it.

Pruning is also the best method of thinning and improving the quality of the grape crop. With judiciously pruned vines to start with, the after-thinning is simple and easy. All that is required is to rub off the superfluous buds and shoots. A vine producing twenty-five pounds of fruit in clusters of half a pound and upwards, will bring more money than one producing the same number of pounds in clusters of one-quarter of a pound each, give more satisfaction to the grower for home consumption, and save labor and time in gathering.

The sum of the matter is, that in most cases, larger, more beautiful and finer fruit can generally be raised when a very considerable portion of the sets are removed. Apples or peaches when crowded closely along a limb are no more able to obtain full development than beets or cabbages when set too closely in a row. It will generally pay to reduce the number of sets in some way. The exceptions in the case of pears, however, are simply proved that some varieties will not respond to this treatment in some places. These facts the fruit-grower must learn by experience. The commercial grower raises fruit for the profit. He must study his market to know how far his gain from increased quality will warrant the increased expense of thinning. The amateur, who prides himself on fine specimens for exhibition, or for his table, does not stop to consider the financial side of the question. He simply takes the necessary steps to secure what he wants. His labor in this direction is often really a pastime, and if he does not reap his reward in his satisfaction from day to day he is pretty certain to do so when his crop matures. Those who have not studied and experimented in this field will be surprised to find that in many cases the very finest fruit is produced only after thinning has been carried on to an extent that would seem to the novice most extravagant.—E. Williams, in Garden and Forest.

Rare and Peculiar Apples.

Alembert Pippin.—This appears to be the Newton Pippin of the east. It has succeeded admirably in the valleys of the mountain regions of Virginia, and growers there have been receiving this season \$4 per barrel for the red lands this apple does not succeed, even in Virginia. This is a noble apple where the soil and climate are congenial, but it is quite fastidious and will not perfect its fruit over the country at large. It flourishes on the Hudson River and in some parts of Pennsylvania.

Sutton Beauty.—This is a valuable winter apple, with yellow skin striped with crimson.

Stump Apple.—This is a valuable winter apple, with yellow skin striped with crimson.

The Stump apple is not so well known as it deserves.

It originated near Rochester, N. Y., where it has a reputation for great beauty, productiveness and freedom from defects.

I have seen trees loaded with the Stump apple, every one more beautiful than the wax specimens seen in show cases, none knotty, wormy or mis-shaped.

I sent a package of these to Charles Downing, and he was delighted with them.

In appearance it is something like the Cheenango Strawberry, but more beautiful. This flesh is white and the quality good. It sprang up in an old partly decayed stump, where the seed had been dropped, and grew there until the stump disappeared, like a sapling in a barrel, hence its name.

Kentish Fill-Basket is the largest apple I have seen, and one of great beauty. I saw it first at the Rochester meeting of the American Pomological Society, where it overshadowed all others in size and beauty.

It is an early winter variety, of English origin, sub-acid, excellent for cooking.

The Salome apple comes from Illinois,

where it has been proved hardy, productive

and a long keeper.

It is of medium size, good form and comes into bearing early.

It sticks well to the branches during heavy winds and has been known to keep for twelve months.

Fallwater is a very large, beautiful fruit,

reddish on yellow skin, quality good, origin Pennsylvania.

Rambo is an early winter apple, streaked

with yellow and red, tender, juicy, rich acid, excellent quality, succeeds nearly everywhere, except in the severe localities of the west.

Sops of Wine is a valuable late summer apple, medium size, dark red, fine white flesh, sub-acid and fine flavored.

Fruit fair and showy. Rawles' Janet is hardy enough for the far west, mostly grown

in Ohio. It blossoms late, hence escapes

late frosts. Medium size, pale red, mild sub-acid, fine, crisp, juicy, a long keeper. Stark

is a large & tripod apple, sub-acid, mild and good. A long keeper, origin Ohio.

If you are planting an apple orchard and

are at a loss to know what varieties to

select settle on Dauchess and Wealthy for

two of the most reliable the country over;

Duchess for fall, Wealthy for winter.—

Green's Fruit Grower.

FLORICULTURAL.

To keep the chickens out of the flower beds, stick short sticks four inches apart all over the beds and leave the tops from four to six inches above the surface of the ground. Chickens will not bother beds fixed in this manner.

ANY plants that have become sickly looking can often, by the aid of a few doses of nitrate of soda, be quickly brought to a perfect state of health again; but being very powerful in its action this must be used in small quantities, a piece about the size of a marble is large enough for a twelve inch pot. This fertilizer has also the effect of forcing plants on much more quickly than other manures, and is therefore valuable for assisting those that are naturally slow growth.

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A CORRESPONDENT of the Horticultural Times says: "Upon a lawn which I recently noticed there was growing a large clump of white Petunias, completely covered with pure, sweet, white blossoms. The secret of their wonderful growth was simply a bottomless earthen pot, sunk into the earth and filled with old ship dirt and stable manure to within six inches of the top, the rest being filled with the earth taken from the ground where the pot was set. I never saw so large a growth on a plant, or such an abundance of bloom, and it kept its beauty till November."

The two greatest enemies to plants in pots are want of drainage and sour soil. Perhaps the one is the cause of the other. Many people do not see the necessity for drainage; they do not understand why gardeners put all those crocks in the bottom of a pot. In the same way the same people cannot see why farmers and gardeners go to the expense of putting in drains. One cause of sour soil is too large a pot; another is over-watering a plant, keeping the soil in an everlasting state of slop; still another is putting the plant in soil or compost which is too close and binding, and which does not allow the water to percolate through. Use as small pots as the roots will allow. Give too much drainage rather than too little. Once a year is often enough to report.

The Gloxinia, says Vick's Magazine, is readily propagated by cutting and seeds. The former method is recommended as best for amateurs, as the seeds are few and require care in sowing and during germination. Cutting from the Gloxinia should be made during the hot weather if the plants are in the conservatory or living room, as later in the season they have a tendency to decay, doubtless from want of a proper degree of heat. Cuttings can be made in the greenhouse at any time with a prospect of success, and by treating the leaves as the florist does those of the Begonia Rex, a large stock of bulbs may be secured from the vials. It is well, however, for the amateur to confine experiments to the entire leaf or shoots, the latter, if taken from the bulb when about two or three inches in length are almost certain to strike root under favorable conditions of soil and temperature, if not kept too wet. The Gloxinia is positive on one point, it will not endure much water, except when in a thrifty, growing condition, and even then care must be taken to have the pots thoroughly drained. To increase the number of plants of any desirable variety or varieties, leaves of the same may be placed around the edge of a six or seven inch pot filled with sandy soil. The leaves should be cut with a stem of sufficient length to retain them in position when inserted in the earth, which must be pressed firmly around them and well watered, after which water should be used with care. If the leaves, after a few days, brighten up and look dead, and no shoot makes its appearance, don't lose all faith in raising Gloxinias from the leaf, and throw the contents of the jar, dead foliage and all, out of doors, for the chances are that down at the base of those dead leaves are good, thrifty bulbs in a dormant condition, only waiting the proper time for starting into growth.

Your House on Fire.

□ Not the house of wood, or brick, or stone, in which you live, but your bodily tenement may be in terrible danger from smoldering fire which you make no effort to quench. The great danger from impure blood is that it debilitates the system, and the digestive organs grow weak and inactive. Hood's Sarsaparilla combats the best kidney and liver invigorators, with the best alternatives and tonics, all from the vegetable kingdom, carefully and understandingly prepared in a concentrated form. It purifies, vitalizes, and enriches the blood, tones up the system, giving the whole body vitality, and effectively guarding it against the attacks of disease.

Hood's Sarsaparilla

is the most popular and successful medicine before the public today for purifying the blood, giving strength, creating an appetite.

"I suffered from wakefulness and low spirits, and also had eczema on the back of my head and neck, which was very annoying. I took one bottle of Hood's Sarsaparilla, and I have received so much benefit that I am very grateful, and I am always glad to speak a good word for this medicine." Mrs. J. S. SYDNER, Pottsville, Penn.

Purifies the Blood

MICHIGAN FARMER

AND -
STATE JOURNAL OF AGRICULTURE.

GIBBONS BROTHERS

- SUCCESSORS TO -

JOHNSTONE & GIBBONS. Publishers.

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DETROIT, SATURDAY, JULY 14, 1888. D

This Paper is Entered at the Detroit Post-office as second class matter.

WHEAT.

The receipts of wheat in this market the past week amounted to 24,211 bu., against 15,062 bu. the previous week, and 188,817 bu. for corresponding week in 1887. Shipments for the week were 30,841 bu. against 26,619 bu. the previous week and 31,655 bu. for the corresponding week in 1887. The stocks of wheat now held in this city amount to 164,851 bu., against 214,677 bu. last week and 165,129 bu. at the corresponding date in 1887. The visible supply of this grain on July 7 was 23,031,727 bu., against 23,629,989 the previous week, and 32,757,190 for the corresponding week in 1887. This shows a decrease from the amount reported the previous week of 598,262 bushels. As compared with a year ago the visible supply shows a decrease of 9,755,463 bu.

The market has fluctuated more or less every day for the past week, and often for no good reason beyond the fact that some Chicago speculator had decided to sell or buy, but that the northwest had two days of fine weather. As a matter of fact there is no reason why these frequent fluctuations should occur in the market, except that they furnish the dealers with an excuse for marking up charges against those who are fools enough to entrust them with their money to invest on options. If the market was a dead level except for sufficient causes, then the option business would die out and the "big fours" and other baronies on the country would have to turn their attention to some productive enterprise or take to stealing. They would really hurt legitimate trade less in the latter occupation than as the custodians of the funds of those foolish enough to meddle with "deals" and "options." The prospects have not undergone the slightest change during the week although spot wheat has declined from 14@14c. and futures 14@14c. All domestic markets were weak yesterday, and a decline was reported at New York and Chicago. Cable reports were buoyant than for the previous three days, owing to improved weather conditions.

The following table exhibit the daily closing prices of spot wheat in this market from June 20th to July 13th, inclusive:

No. 1	No. 2	No. 3	Wheat	Barley	Rye
June 20.					
21.	84½	84½	84½		
22.	84½	84½	84½		
23.	84½	84½	84½		
24.	84½	84½	84½		
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30.	84½	84½	84½		
31.	84½	84½	84½		
1.	84½	84½	84½		
2.	84½	84½	84½		
3.	84½	84½	84½		
4.	84½	84½	84½		
5.	84½	84½	84½		
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30.	84½	84½	84½		
31.	84½	84½	84½		
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1.	84½	84½	84½		
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5					

paper that all personal property will go in the hole. His life insurance, \$65,000, will go in his family, and that is about all they will get.

General.

The acreage of winter wheat in the United States is now estimated at 1,250,000 acres.

Canada's public debt June 30 of the current year was \$251,855, an increase of \$8,345 within a year.

An ancient silver mine north of Duluth has been discovered, and the "diggings" are sufficiently rich to repay working.

A cloud-burst at Kansas City flooded the streets two feet deep with water, filling the streets and carrying away small buildings.

A new Jewish orphan asylum, which cost \$100,000 and is one of the largest institutions of its kind in America, was dedicated at the end of the first of the week.

The sufferers by floods in Mexico are reported to be very destitute. At Leon the situation is especially deplorable, hundreds being without sufficient food or clothing.

On the 11th last, in Indianola, stable at Buffalo destroyed the horses and contents. Two employees, John Burnard and Wm. Benjamin, lost their lives, and forty horses were burned.

Reports from Grand Marais say a ledge of native silver has been discovered in the mine 10 miles distant, 30 miles inland. It is believed the long lost mine has been discovered.

Gov. Morehouse, of Missouri, declines to repeat or commute the sentence of Hugo Black, alias Maxwell, murderer of Arthur Parker, but has respite him until August 1st.

The value of the property destroyed by the fire in West Virginia is estimated at two million dollars. Two lives were lost. The fire began Sunday, July 1st, and continued until the 11th.

A passenger train on the Virginia Midland railroad fell through a trestle 18 feet high near Orange, on the 12th. Six persons were killed and 25 injured. The bridge was known to be unsafe.

John Wanamaker, Philadelphia's merchant prince, carries life insurance amounting to \$200,000. He is insured in 29 companies, and pays \$60,000 annually in premiums. John Setton, hat manufacturer, is insured for \$100,000.

George Gutzermuth, of Louisville, Ky., wished to marry Edie Brecker, 16 years of age. She refused his ring, telling him she was too young to marry. Without further words he drew a pistol and in her presence put a bullet through his heart.

Chairman Hope, of the Grievance Committee of the Brotherhood of Engineers, and Chairman Murphy, of the Firemen's Brotherhood, were arrested at Chicago on the 11th for complicity in the alleged conspiracy against the "Q" road.

A number tank in Armstrong's paint and varnish at Chicago exploded on the 10th, blowing up three other tanks and destroying barrels of paint and 100 of varnish. Alex. Abington, an employee, was instantly killed in oleomanganic factory next door.

Robert Oberchrist, one of the famous lawyers of New Jersey, and commanding the largest income of any lawyer in the State, died last week. He once received a fee of \$1,000 for his services in defeating a bogus claim to a legacy left him by a widow who had left the country to the government to be paid to the reduction of the national debt.

A syndicate of oil men has purchased 180 acres of land in Wood County, Ohio, in the midst of the oil producing territory, for \$122,000. The land has never been drilled, though it is said by experts to be as rich as any of the petroleum lands. It was originally bought for \$3,000, and was profitable farm land.

And now lawyers say there are doubts of the validity of the oil claims of Daniel of Houghton, who was recently married to Mrs. Hamerly, a wealthy widow of New York, by Mayor Hewitt, and also by Rev. D. F. Foster. The question naturally arises what constitutes a legal marriage in this country.

A Port Arthur firm sent to Glasgow, Scotland, for a steamer which is named Algoma. To get the vessel through the canals the lakes it had to be cut down to 100 ft. and was accordingly loaded in sections and transported in boats and put together at Port Arthur. The ship is said to be inferior to those built in this country, and with the unexpected necessity for rebuilding must be a great expense to the purchasers.

A gas well near Weeker, Ohio, which supplied the village with gas for fuel and light, became accidentally ignited and exploded, killing the man who was instantly beyond control, burning furiously, melting the pipe and confounding the supply and permitting the gas to escape in great quantities. No one can approach near enough to put out the flames, and the problem of how to extinguish it seems insurmountable.

It is stated that an agency to find employment for emigrants, has farmed out not less than 1,000 poverty-stricken individuals in the New England States alone, providing them with situations where they work for almost nothing. The agent gets a percentage of the agent's big fees. Men work for \$1.00 and women for \$50 annually, and these low stipends are deducted charges for "necessaries purchased" which leave the emigrant perhaps \$45 or \$50 for a year's expenses.

Near Atchison, Kan., is the largest cotton-growing state. It contains 640,000 acres or a square mile of territory. Before sowing for this crop the land was covered in a heavy soil of buffalo grass. Twenty-five plows were kept at work, and the drivers were kept at their wheels. These drivers require four horses and two men to manage each. It took 22 days to break and plant the 640 acres, and 100 bushels of corn were harvested.

A good deal of Michigan capital is being invested in pine lands on the Michigan Bay, and Spanish moss is being along the shores of Lake Huron, in Canada. The land belongs to the Canadian government. The wood is bought at an average of \$1.25 per acre, which does not include the growing timber. The charge averages \$1 per 1,000 feet. The quantity of timber on a tract, and the purchaser is protected from fire and theft till the timber is cut.

The death of Mr. Mandeville, confined as a political犯 in the Tullamore prison, is due, it is said, to the severity of his treatment. He was given a diet of bread and water and would have starved but for the compassion of the officials in giving him occasionally a little nourishing food.

The Debeers coal mine at Kimberley, South Africa, caught fire on the 11th, imprisoning 800 miners who were at work thereon. It is thought 500 were perished, including the manager of the mine. Many of the victims were women.

The Queen Natalie and her son, the crown prince, took refuge from King Man in Wiesbaden, in the Prussian province of Hesse-

Nassau, and the king has formally invoked the aid of authorities to force the queen to return to him their son, the young prince. So even crowned heads know family trouble and scandal.

NEW ADVERTISEMENTS.

SOMERVILLE SCHOOL
FOR YOUNG LADIES.
ST. CLAIR, MICH.

Three courses of study. Thoroughness in every department. Buildings elegantly furnished. Head of steam, heated with gas. Classes in music and art. Address for circular. SOMERVILLE SCHOOL, St. Clair, Mich.

FOR SALE
ON REASONABLE TERMS.
A DAUGHTER OF LOUIS NAPOLEON.
Four years old and an easy mover. For further particulars address E. C. MCKEE,

LAINGBURG, MICH.

POT STRAWBERRIES
GROWN

Now is the time to plant to secure a good crop.

Catalogue containing full directions

free. J. W. LEEWARD, ROCHESTER, N. Y.

1000 MEN WANTED

To sell our Nursery-stock. Reliable Men of energy can find permanent employment and big pay. Payment free. Terms cash or credit. Address, J. W. LEEWARD, ROCHESTER, N. Y.

DAN. DONALDSON, Auctioneer.

A WONDERFUL PROCESSION

Of what? Why the constant stream of Hogs, Cattle and Sheep continually passing into the

Union Stock Yards, Chicago,

— THE —

BONE AND BLOOD
OF WHICH ARE CONSTANTLY BEING MANUFACTURED INTO
FERTILIZERS

During the past 25 years by the Thompson & Edwards Fertilizer Co.

UNION STOCK YARDS, CHICAGO, ILL.

JULY 14-15

28,000 Acres of Land
IN WAYNE COUNTY, MO.

Good timber, farming and grazing. Well watered. No better for fruit and stock farms in the United States. Iron Mountain R. R. and two other buildings, etc., close to an estate. H. M. NOEL & CO., Bankers, St. Louis, Mo.

PURE SALT.

DID YOU EVER THINK,

That Pure Salt adds its fine flavor to all food soasned with it. Its preserving and antiseptic qualities keep meats, butter, cheese and other products better, longer and more perfectly than common salt.

That Impure Salt is as dangerous as impure water. It injures the health, its effect on the kidneys being especially disastrous, causing disease and even death. It is a cause of many diseases.

ECHO, AGGIE, and other noted families. This is a splendid chance to buy MAGNIFICENT FOUNDATION STOCK.

For particulars and Illustrated Catalogue write

BUCHANAN BROS., 225 Dearborn Street, Chicago.

THE ENTIRE HERD. We have disposed of our farm, and will sell our cattle without reserve at

ROCKEFELLER, On the Wisconsin Central R. R., 33rd and Michigan, Chicago, July 18th, at 1:30 P. M.

The herd has been bred with great care and has been sold out of consequence we do not

sell a lot of cattle.

200 head bear the NETHERLAND name, and most of the others are descendants

of ECHO, AGGIE, and other noted families. This is a splendid chance to buy MAGNIFICENT FOUNDATION STOCK.

For particulars and Illustrated Catalogue write

BUCHANAN BROS., 225 Dearborn Street, Chicago.

CINCINNATI JULY 4th to OCT. 27th

ENTRANCE TO THE OHIO VALLEY

GRAND JUBILEE celebrating the Settlement of the Northwestern Territory.

UNSURPASSED DISPLAY.

NEW BUILDINGS.

FRESH EXHIBITS.

NOVEL ENTERTAINMENTS.

DAZZLING EFFECTS.

EXCURSION RATES FROM ALL POINTS.

1868. M. W. DUNHAM

WILL PLACE ON SALE APRIL 24,

TWENTY STALLIONS,

ESPECIALLY RESERVED FOR THE SPRING TRADE.

DIAMOND CRYSTAL SALT.

It is good but litte more than ordi ary salt, and less than the best English. It is not good.

It is especially refined for Best Table and Dining room use. It is chosen enough for everybody. Ask your grocer for it.

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Poetry.

THE ASSESSOR AND ASSESSED.

On the property possessor now the wicked old assessor
Seals with watchful eye and stealthy, cat-like tread.
But the honest old p. p. soon lets the villain see
What a good thing 'tis to have a level head.
He smiles on the assessor, does the property possessor,
And he bids him take a seat and rest awhile.
His look is mild and frank as the o. a. fills the blank
With an honest valuation on his pile.
"Have you stocks or bonds?" "Not any—
That is, that's worth a penny."
"No horses, cows, or sheep, or mules, or asses;
No dogs of either sex?" "Sir, my wife won't let 'em vex her."
And so clean down the list he passes.

"But that old plug is Josie's, and the cow is Uncle Moss's.
But if you want to, why, just put 'em down.
That dog? Oh, he's a wiry Tom found the other day."
Some farmer lost him. I expect, in town."
You won't take that old phonie, the one that John beat on?
Waal, pat her in, we'll say at fifteen dollars.
That crazy oil planner? It belongs to sister Hanner.
Talent hardly worth a box of paper collars.
My watch? Twas bought for gold, but then it's dreadful old.
I've tried to give the old thing to the boys.
The one that Josie carries? I reckon that is Harry's.
Her beau, that's him out in Illinois.

"Waal, yes, I guess that's fair;" and then he takes a swar.
To the lie is told about his pelf and plunder.
And the wicked old assessor leaves the property possessor.
Tahnking, "Can't some honest people lie like thunder." —*Indiana Journal.*

Miscellaneous.

TWO SHIPS.

BY EMILY HUNTINGTON MILLER.

Two girls in the kitchen of a plain, old-fashioned house were busily sewing, the elder rapidly running a machine, the younger trimming a straw hat with odds and ends of ribbons, which she tried in vain to coax into some appearance of freshness.

"How does it look, Mattie?" she asked anxiously, holding it off a little, and slowly turning it around.

Mattie looked up from her machine without stopping its quick motion, turned one comprehensive glance upon the hat, and said, impulsively, "Like a last year's bird's nest."

"Oh, dear!" said Dolly, flushing all over her pretty, worried face, and tossing the poor little hat into a corner. "What is the use any way. We may as well give up and go to the poor house first as last."

"I'll never give up, first or last," said Mattie. "Somewhere and somehow I know there must be something better for us, and we are sure to find it sooner or later; but in the meantime I can't afford to waste any of my strength in pretending. Our clothes are old and shabby and dingy, and it's no use trying to make them look anything else."

Dolly gave a sigh that touched Mattie's heart.

"Poor little Dolly! It's too bad for you; you're so sweet and pretty and patient. Just wait till my ship comes in."

"An' you shall have siller.
An' wear a gold ring."

Dolly smiled faintly.

"That was what father always said when we wanted anything. I used to believe in that ship as much as I believed in next year, and sometimes I indulge myself in dreaming about it now, and fancying what it will bring us."

Mattie set the last stitches with lips compressed, and began folding the coarse shirts on which she was working into a compact pile.

"Are they finished?" asked Dolly.

"No; I'll sew on the buttons to-night; I'm going out to look for our ship."

Mattie put on a hat older and more openly ugly than Dolly's, and walked down the street with her firm, rapid tread. Once she turned to look back at the small, brown house that was the only inheritance her father had left to his wife and girls—a fortune that seemed indefinitely smaller now that the mother had gone also, after a protracted sickness that had consumed the last dollar from the sale of the orchard and garden. The coarse sewing, with which the girls managed to keep soul and body together, was certainly better than nothing, and was considered a respectable resource; but, at best, it was working with starvation swinging a merciless lash over their heads.

She went where many a poor soul had gone with perplexities that seemed nobody's business—to the minister. No doubt in that penurious, poverty-stricken community the good man had perplexities of his own, but that only helped him to sympathize with other people, and few households held any secrets from him. The old housekeeper, knitting on the porch, welcomed Mattie kindly. The minister was away; "gone to South Adams to 'tend a funeral," but she was looking for him every minute.

Mattie went to the study, and turned wearily from the rows of solemn old books to find refreshment in the papers upon the table, that seemed so much more modern and human. There was a story that looked tempting with its spicy bits of conversation, in that line herself, and at last a letter from a woman addressed to the editor, complaining that the world was out of joint and in need of regulating.

"So it is," thought Mattie, nodding assent as heartily as if the writer was sitting there in the leather-covered chair opposite her. As she read, her dark face flushed and her breath came more rapidly. Why, here was a woman in desperate need of help, and here was she, asking only the chance to help her, and they were but 20 miles apart.

But then, perhaps, the letter was just

made up, and put in the paper; perhaps there was no Mrs. E. L. Howe; and at the thought Mattie threw down the paper and went to meet the minister, who was coming in at the gate. He smiled at her impatience, and seated himself very amably to read the letter, which would never have attracted his notice. He smiled again when he looked up at her, and quite agreed with her that the writer was probably a fiction of somebody's brain, created to make forebore the undoubted truth that there were scores of women, with beautiful homes, whose wealth brought them nothing but bondage, because of the impossibility of obtaining the help of intelligent, dependable, care-taking servants; while there was a great multitude of women in need of homes, and driven to all manner of miserable makeshifts for a mere livelihood, who might, if they would, supply just this service, with mutual satisfaction and benefit. The problem was to bring them together.

"But if the letter were genuine, my child," asked the minister, "what then?"

"Then," said Mattie, promptly, "I would write to the woman, and ask her to let me try. I should like nothing better than to be her housekeeper. I delight in housekeeping; I'm a born cook, and Dolly would be perfectly happy with two babies to cuddle and sev for."

The minister looked at her doubtfully.

"I suspect it is only the rosy side of her work that this letter-writer describes; there must be a good many disagreeable things about the position of cook or nursery-maid."

"There are many disagreeable things about our present position," began Mattie, but stopped abruptly.

Not even to the minister would she have owned that they were actually pinched sometimes for suitable food.

"Do you think?" she asked, hesitatingly—
"there would be any impropriety in my writing to this lady to inquire."

"Not in the least; I will forward your letter with a line to the editor. Why not write here?" he continued.

And with the promptness of desperation Mattie seized the venerable goosequill, with which alone the minister thought it possible to write a sermon, and penned upon a great, square sheet a brief, ladylike letter. The minister's indorsement was also brief, to the effect that the writer was a sensible, practical, Christian girl, tolerably well educated, and would, in his estimation, be a benediction in a family such as that described in the communication signed Mrs. E. L. Howe. While he thought it more than probable that the case was a fictitious one, he felt sure that there were multitudes of women similarly situated, and the editor would be doing a good Christian work if he would put this young woman in communication with some one of them.

The joint letter found its way in due time to the sanctum of a puzzled and amused editor, who frowned and laughed alternately over its contents, half-disposed to toss it into the waste-basket, but finally put it in his pocket with a dozen other documents. It might have remained there indefinitely, for the editor was a young man, and had no personal interest in the domestic problem, but, during that day with his sister, his serene enjoyment was suddenly disturbed by a series of dull thumps upon the stairs, followed by piercing screams.

"There!" said Mrs. Lattimer, rushing forward. "She's let the baby fall down stairs; I always said she'd kill it! I shall dismiss her the minute Fred gets back!" she panted, returning with the baby. "I never draw an easy breath except when the children are asleep."

"Ah, I always felt that I was born to be a benefactor," said the editor. "Your ship would have come in long ago if you had called me for a pilot."

"And which one did he marry?" asks the saucy girl at my elbow.

"Neither of them, my dear. Pretty Dolly, in the course of time, went back to Hingham, and married a farmer's boy, who had worked his way through college, and was not ashamed of his wife for having made her way in the same fashion; and Mattie, for ought I know, is a middle-aged and respectable old maid, living on her savings, and educating heathen in Africa. For this story has nothing to do with marrying or giving in marriage, but with the fact that a good many ships that are continually at sea might come prosperously in, if they would only join company with each other, without regarding the fact that one might be a merchant vessel, and the other simply a lugger.—Raymond, what on earth are you talking about?"

"It's all here, you can see for yourself. The fact is, I've been thinking a good deal about this labor question; and one evening I wrote a letter for the Journal, purporting to have come from a Mrs. E. L. Howe, setting forth her troubles with servants, and appealing to the host of respectable unemployed women for help."

"Well, here comes a letter from a rustic maiden, who speaks for her sister and herself, and proposes to undertake the job. She's in serious earnest, too, and I'm quite impressed by her letter. Just read it."

Mrs. Lattimer read with a critical, not to say sceptical air.

"I'd sooner have Bridget with all her papery temper. Deliver me from superior, I'm-as-good-as-you-are servants. I intend to make you to order,—a cook and a nursery-maid,—natives, sisters, capable, educated, warranted by the minister; what more could you ask?"

"Raymond, what on earth are you talking about?"

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"Well, here comes a letter from a rustic maiden, who speaks for her sister and herself, and proposes to undertake the job. She's in serious earnest, too, and I'm quite impressed by her letter. Just read it."

Grandfather made no reply, realizing that she always had the better of him in argument, and the meal was finished in silence.

A year before, my relatives, both of whom were nearly fifty years old, but strong and hearty, sold out their farm in Ohio and located in western Kansas. Their children were all married off, and the old couple were entirely alone. They had a good couple, and had already made many improvements.

The location was not thought to be as dangerous one, although a few miles below the last hamlet in that section and three miles in advance of the location of the previous settler. The Indians had raided this part of the country the year before, but the soldiers had given them a severe rebuke, and it was not believed that they would venture back again.

Grandfather realized that an escape had been made, and she laid down the revolver and stood ready to open the door. As the fugitive got within twenty rods, being then thirty rods ahead of pursuit, she began to unbar the door. She had only touched it, when someone leaped against it, not one, but four or five. Finding it fast, the savages, for such they were, set up a howl of rage and retreated out of range.

Grandfather was standing still about fifteen rods from the door, and the woman did not have to look twice to see into the game. One of the Indians had donned the prisoner's clothing, jammed the familiar hat over his forehead, and the pursuit was all a sham.

In her young days grandmother had been an emphatic "romp." She could skate, play ball, pitch quoits, ride at a gallop, shoot a rifle, and even to the day she was married went by the name of "Balley's Tomboy."

and stipulated that the engagement was only for a month of trial, at the end of which time, if Mrs. Lattimer was not pleased, she would pay their expenses home.

"It'll come pretty tough on you, Martha Harper, being locked down on as a servant," said the kind old housekeeper. "You won't have any 'sociation' with the family."

"I don't care to associate with the family; we don't associate with the men who make shirts for," said Mattie. "I shall have Dolly, and Dolly will have me, and we shall both have the babies. I don't think we shall care for much more."

It was only at Mattie's earnest entreaty that the minister forbore to accompany them to their new home.

"It would look as if we expected to be received as something more than we are," she said to Dolly. "And I want her to understand that all we ask is fair wages for fair work."

So they went alone. A smart-looking maid answered their ring at the door-bell, calculated their social standing at a glance, and left them in the hall while she went for her mistress. Presently the girl came back and conducted them to the kitchen. Mattie's eyes noted that the floor was unswept, the range greasy, and a pile of unwholesome-looking towels lay on the table; for Bridget had been gone a week, and a procession of supplies, each one worse than the last, had held brief possession of her kingdom.

"I am so glad it isn't a basement kitchen, and see what a nice large yard," she said to Dolly, whose eyes were already overflowing with tears.

Something came clattering along the hall, and the door was pushed open to admit a beautiful boy of four, drawing a tin horse after him.

"Oh, you darling!" exclaimed Dolly, rapturously.

But the boy drew back a little, saying—
"Where's Bridget?"

And in a minute the nurse pounced upon him, and dragged him off, calling him "a little torment, and a bad, naughty boy."

Mattie's first bread, rashly undertaken

and stipulated that the engagement was only for a month of trial, at the end of which time, if Mrs. Lattimer was not pleased, she would pay their expenses home.

She stood in the door that morning and watched Peter bring his horses and plow and drive off through the fields to his work half a mile away. Then she looked to the west, back at the sun, and went in and took the rifle down from its hooks. It had been loaded for months, and she drew the bullet, carefully wiped the barrel, and loaded the weapon again as nicely as a hunter could have done it. Placing it in a corner, she went to an old chest, fished out powder, lead, caps and bullet molds, and soon had fifteen or twenty shiny bullets on the table. Then the revolver was got down, cleaned up, loaded, and finally the woman went to the door to look for her husband.

She could see him following the plow in the distant field, and the happy songs of the birds were anything but harbingers of a coming affray, in which more than one of those shining bullets would find a human target.

"Peter Barnes, you are an idiot!" spoke the woman, watching him a moment. "I don't want harm to come to a half of your head, but you will get a fearful lesson before you are dead."

The savages then tried another plan.

They took the old man out of the woods, naked, except his shirt, tied him to a wild plum tree just out of rifle range of the house, and then set about maltreating him, hoping to work on the woman's sympathies.

Grandmother could see every movement made, and she was nearly crazed to see them assault the old man with knives and clubs.

They pricked him until he was covered with blood, though not seriously wounded in any spot, and cutting a number of switches from the hazel bushes, they whipped him until they were tired of the sport.

The old man groaned a little, but they could not make him cry out, as they had hoped to do; and in his heart he hoped that grandmother would not be imprudent enough to attempt interference.

The old man groaned a little, but he hoped that grandmother would not be imprudent enough to attempt interference.

He heard the sound of the gunshots, and the woman allowed the savages to get away.

Several of them moved back out of the range of the knot hole, skulked around to the north side of the cabin, and grandmother's first intimation of their presence was when she heard the crackling of flames in the brush, which they had previously piled against the north door. As soon as the flames were lighted, the savages drew off a few rods and commenced shooting at the spot over the door where she had pulled out the chinking to shoot at them before. Notwithstanding the whistling of the balls, which every moment came through into the garret, the woman mounted the ladder with a pail of water, dashed the contents out through the crevice, and mere accident guided the dash so that the flames were drowned out.

Grandfather had his arms tied behind his back, and after a few minutes walked out a few feet in advance of his captors. He pointed to the house, then looked back, and refused to obey the command given him.

The Indians advanced, drew their tomahawks, and then the captive shouted:

"Nancy! Nancy! unbarr the door, leave the rifle in the house and come out here. They won't hurt you!"

The wife heard every word of it, and the trembling tones of the old man's voice made her heart ache. But she knew that the Indians had forced him to make the appeal and that it was only a ruse for them to get another prisoner. She made no reply, and directly the red skins forced the old man to speak again.

"Nancy!" he called, "the Indians say if you don't come out they will murder me right here."

It was the hardest struggle of her long life, but grandmother realized that both would certainly be murdered if she complied, and if she held out there was hope that help might come from immigrants or hunters before night. Tears came to her eyes, and she could not choke down her sobs as she thought of her husband's fate; but she was determined to resist to the last. As she did not reply, one of the Indians, who could speak English quite well, stepped out and shouted:

"Come, hurry up, quick. You no come out we kill old man!"

"Peter Barnes," shouted grandmother, her mouth at the knot hole, "I know that you don't want me to come out, and I shall not come! I have the rifle and the revolver, and I shall defend the house to the last!"

When the foremost savage was twenty rods away, out on a line with the barrel, there was a quick report and the Indian fell forward on the grass. Then she stepped back, closed the door, and the next moment the shouting demons jumped against it. The door stood like a rock. Baffled and disappointed, the Indians hacked at the boards with their tomahawks, as if to hew their way in. Striking away, one of the blows fell on a knot in the plank, and the knot fell at the woman's feet, while a hole as large as a man's fist was left behind. They counted them as they went away to be sure that none were left behind. They opened the door, took a scow around her house, and then her eye fell upon the horses. The animals had made a long run when first taking flight, going across the fields for a mile or more, and were now coming toward the house dragging a portion of the plow after them. In ten minutes the woman was galloping toward the nearest settlement, carrying both rifle and revolver. A ride of an hour brought her to the hamlet, and seven or eight men quickly mounted their horses and returned with her. The cabin had not been disturbed, and leaving the horses there the men, headed by the anxious and tireless woman, took up the trail of the Indians. Following it for an hour, nearly always on the run, they suddenly heard the report of rifles, followed by whoops and yells.

Two bachelors named Turner, had a cabin and a farm in the direction of the shots, and the pursuers realized that the Indians had attacked them. They were hurrying to the rescue, grandmother leading, rifle in hand, when she suddenly gave a sign of warning, and all sank down. She had caught sight of grandfather and his two guards. Through the sparse timber the men could hear the Indians bagging for admission without pay, but were refused. An elderly clergyman who happened to see the refugees, quietly handed them over to the Indians.

FARMER JOHN'S SOLOQUY.

I must as well acknowledge, 'taint no use o' beatin' round,
I've done a heap o' thinkin' plowin' up this fallen ground.
An' I must be a paun'in' an' achin' me like
sin—

I reckoned 'twas dispey of malar'y creepin' in,
At least I got my dander up, an' to myself sez I:
The biggest fear in Natura' hevus that tells his
self a lie.

I've been a paun'in' on 'tis malary, an' my stum-
mick, when I know—

My conscience that's a hurtin' an' a
worryin' me so.

I've been a shakin' this here thing for thirty
year or more.

An' I had this shakin' up an' settin' down
shore.

I've been honest fur payin' goes, not a penny
do I owe.

But the kind o' cheatin' that I done was the
kind I know.

My wife goes back to Hanner, when I fetched
her here a bride—

No uppie bloom was sweater, an' she mussed
to my side.

Like she thought she had a right to, an' could
trust me without fear.

For the love I never hinted at for more'n thirty

There was churkin', bakin', blikin', there was
gussin' an' the rest.

But the explanation wouldn't be under-

stood by the general public, I'm afraid.

So I'll have to give some details. Carbonic
gas, the vital element in soda water, is made in
this mortar-like machine, known as the
generator.

"In the round receptacle is the marble
dust, and the vitriol drips on it and gen-

erates the gas. The gas, however, not be-

ing pure carbonic acid, it has to pass through various "purifiers" being conveyed

there in block tubes. In the "purifiers"

is water, which gradually absorbs all the

foreign components of the gas. When

the gas is fully absorbed, the valves above

are simply appendages of the tube. In

fact, if a teredo should have his foot am-

putated, he would in a most vital sense
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(Continued from first page.)
cess as those teaching us how to raise our crops. I answer, more so, for on one hand we have Providence and nature to help us; and on the other we have to contend with monopolies, trusts, and scheming, tricky politicians.

J. D. Reed, of the Columbia Club, said: "It is hard to make a rule that could be successfully followed by all persons on all soils and in all seasons. If we would make a rule, we must have an object in view. If it is a problem in mathematics it can be worked to exactness; if in architecture, the draughtsmen has a rule he can follow and reach the object sought. But the farmer, however well he may lay his plans and try to work them out by rule, will find in many instances a wet or dry season, or the failure of a crop will disappoint him, and he will have to lay aside his rule and accomplish his object in some other way. Again, there are two classes of farmers, first, the man who owns a farm but has some other business, makes the farm the receptacle of his surplus income, and with it improves the fences, buildings, etc., and by the passers-by is called the successful farmer. The other who owns and works his own land—the real farmer or tiller of the soil. The same rule will not work for both. In the first place, to the new beginner, or man of moderate means, I would say do not buy all the tools an agent thinks are good, but use some judgment and common sense, and get a few good tools. In the spring, make it a rule to have the wood prepared and the fences and tools in order before you want to use them. Start the plow as soon as the soil is fit. I do not wish to enter into a discussion as to which is the better, early or late planting and sowing, but I would rather be a few days early than a few days late; and having started in the spring in advance of your work, do not change positions and let the work get in advance of you. Make it a rule to lead your work at all seasons of the year; better hire a few days' work now and then, than to fret and worry over work undone. Some succeed as specialists, but I would not advise the average farmer to become a specialist. In selling grain, make it a point to sell all at once, and put the money where it will do the most good. Don't run up a store debt; better practice a little self-denial and economy. In closing this paper I wish to say I believe the great underlying fundamental principle for success in farming is contained in the following recipe: First, good health; add to this common sense, experience, energy and economy. Apply after every meal with the bare hand until the perspiration starts, and you will succeed."

The meeting was adjourned after a short discussion to attack a bountiful repast prepared by the ladies.

W. H. RANDALL.
Sec. Columbia Farmers' Club.

Canadian Cheese-Making.

The following system of cheese-making by the Allentown Cheese Combination of Lancaster, Ont., as described by the manager, Mr. Ruddick, is taken from a trade circular issued by D. H. Burrell & Co., of Little Falls, Herkimer Co., N. Y.:

"Receive nothing but pure sweet milk; set at 84 to 86 degrees, using enough of rennet to form coagulation in fifteen minutes; begin cutting in about forty minutes, or when the curd breaks over the finger clean and sharp. All the cutting is done at once and the stirring begins immediately, the sooner the better, but very gently. The heating is also begun at once; but very light at first, gradually increasing the amount of steam as fast as the whey forms out of the curd. The rule established, in stirring the curd, is to stir just fast enough to keep the curd on the surface of the whey at all parts of the vat; as more whey forms, increased agitation is needed. Following this rule prevents any particles of curd resting on the hot tin; should this happen it would cause a permanent injury to the quality of the cheese. The stirring must be kept up for ten or fifteen minutes after the temperature has been raised to 97 or 98 degrees; at no time should the curd be heated over 98 degrees; no stirring is done until after the whey is drawn, which is usually done at the first appearance of the acid change. If the curd is firm and squeaks beneath the teeth, it is then stirred thoroughly once over the whole vat; if not, it shows it is too soft, and stirring should be kept up until it gets sufficiently firm, then it should be allowed to mat over the bottom of the vat, cut into pieces and turned over at the same time. A cover is used over the vat all seasons of the year to keep up a uniform heat in the curd. After one or two hours the curd is passed through the Macpherson curd mill, which cuts it into thin, narrow strips of uniform size, and if the curd is porous it is pressed twice through this mill, so as to liberate the gases and expose as much surface as possible to the air. Stirring of the curd is then kept up for one hour by hand, after which the salt is applied and well mixed in, at the rate of two and a half pounds of salt to 100 pounds of curd; the curd is then heaped for one hour, for the salt to permeate and distribute evenly; it is then put to press in even sized cheese, squarely pressed, lightly at first, gradually increasing the pressure every half hour until the full power is applied—taken out of press and turned the following day. The cheese is removed to cure room and bandage neatly adjusted and ends well greased and rubbed with the hands. Ends well greased and rubbed with the hands."

In this system the stirring is invariably effected by a new and simple device lately gotten up and introduced into all the factories of this combination by the proprietor. Both the peculiar form of this implement and the method of its use, produce two distinct motions of the curd—a boiling motion from the bottom of the vat to the top, and a travelling motion, down one side of the vat and up the other side."

The Splendid Record of One Hundred Years of Civilization.

Cincinnati is now in the midst of her one hundred days' anniversary of the settlement of the northwest territory, as means of showing to the world what has been accomplished in the past century in arts and sciences and material advancement. Her grandeur of one million and fifty thousand dollars, raised among the business community, gave ample scope for broad-minded management, and the result is what might have been expected—a triumph in all

departments. All the States contiguous to Ohio have become officially connected with the enterprise, and from each one can be seen a separate and distinct display of her products, natural and artificial. The general Government has re-inforced this with an immense display of treasures transferred from the capitol of the country. There is an entertainment department on the largest stage in the world by the best talent of this and the "old country." The Pioneer, Horticultural, Agricultural and Machinery Departments are as complete and varied as money and time can make them. The Educational, Religious and Women's and Children's Departments are museums in themselves. The electrical display is of surpassing brilliancy and profusion, and in fact there are a thousand attractions, all of which singly are worth more than the price of admission, which embraces the entire programme.

Commercial.

DETROIT WHOLESALE MARKET.

DETROIT, July 13, 1888.

FLOUR.—Market steady and unchanged. Quotations on car lots are as follows:

Michigan roller process..... 4 20 6 21 25
Michigan patents..... 4 70 6 25 75
Minnesota, bakers..... 4 10 6 25
Minnesota, patents..... 4 75 6 25 85
Rye..... 4 20 6 25 75
Low grades..... 2 40 6 25 25

WHEAT.—Spot sales show a decline of 3 1/2¢ to 4¢ from prices of a week ago, with No. 1 white relatively the strongest owing to scarcity. Futures are weaker, and the decline in the various deals has been more pronounced than in spot. Receipts have also increased. Chicago and New York were weak yesterday, while Liverpool was dull but held up well. Holders are free sellers there at present quotations. Closing quotations in this market yesterday were as follows: No. 1 white, 91c; No. 2 red, 83 1/2c; No. 3 red, 79 1/2c. In future No. 2 for July delivery sold at 83 1/2c, August at 82 1/2c, and September at 83 1/2c.

CORN.—Dull and lower. Quoted at 48 1/2¢ for No. 2, and 49 1/2¢ for No. 2 yellow. In future No. 2 for October delivery sold at 47 1/2¢.

OATS.—Steady at an advance. No. 2 white quoted at 40c, and No. 2 mixed at 35c per bu.

BARLEY.—Market steady and unchanged. No. 2 is selling at \$1 58 1/2c 60 1/2¢ cental, and No. 3 at \$1 52 1/2c 15s. Receipts in this market the past week were nothing, and the shipments were nothing. Stocks in store, 367 bu.

FEEDS.—Michigan bran quoted at \$1 00 10¢ ton. Market firm.

CLOVER SEED.—Prime for October delivery quoted at \$4 40 10¢ bu.

RYE.—Quoted at \$5 00 20¢ bu, in bagged lots. Car-loads are quoted at \$4 00 50¢ bu.

BUTTER.—Market stronger and a little higher. Dairy quoted at 18c for fancy and 18 1/2c for good to choice. Creamery quiet at 18 1/2c. Chosen dairy is scarce.

CHEESE.—New quoted at 92 1/2¢ for full cream cheese, \$2 10c for New York, and 8 1/2¢ for Ohio. Skims quoted at 52 1/2¢. These are jobbing prices. From first hands prices are 1/2¢ lower.

BEEF.—The market is steady at 15¢ @ 16c for fresh receipts. Demand good.

FOREIGN FRUITS.—Lemons, Messinas, 9 box, \$6 00 25¢ oranges, Messinas, \$6 75 25¢ 50¢ box; cocoanuts, 100, \$1 75 1/2¢ 25¢ bananas, yellow, 100, \$1 75 1/2¢ 25¢ 50¢ box; for layers, 14 1/2¢ for fancy. Pineapples, \$3 00 25¢ doz, and very scarce.

BEEFSTEWAX.—Steady at 28 00 20¢ doz, as to quality.

HONEY.—Market dull; new quoted at 14 1/2¢ 15¢ for choice comb and 12 1/2¢ for extracted. Stock large and little inquiry.

MARPLE SUGAR.—Good stock is quoted at 9 1/2¢ 10¢ doz. for Michigan and 11 1/2¢ 12¢ for Ohio. Market dull.

MARPLE SYRUP.—Quoted at \$1 01 25¢ gallon for Vermont.

DRIED APPLES.—No sun dried in market. Quoted at 7 1/2¢ 8¢ for evaporated. Demand light.

SALT.—Michigan, 800 per bbl, in car lots, or 35¢ in 10-lb. lots; dairy, \$1 80 1/2¢ 10 per bbl; Ashton quarter sacks, 72c.

BALED HAY AND STRAW.—Market firm. Timothy quoted at \$14 1/2¢ 15¢ for No. 1 and \$12 1/2¢ for No. 2; mixed, \$3 00 25¢ 30¢ ton. Straw, 7 1/2¢ 8¢ for car lots on track.

BRANS.—There is little life in the market and no improvement is looked for until the new crop is harvested. Letters from the bean growing sections generally report a larger acreage planted than last year, with promise of a full average crop. Old stock out of store selling slowly at \$2 45¢ 50¢ per bu, with very light offerings. No unpicked are arriving.

POTATOES.—Old dull at 50¢ 75¢ 10¢ bu, out of store. But limited demand for old.

ONIONS.—The market is quiet and steady at \$3 00 25¢ 30¢ bu.

HIDES.—Green city, 12 1/2¢ 13 1/2¢ doz, country, 15 1/2¢ 16 1/2¢; cured, 8¢ green calf, 4 1/2¢ 5¢; salted doz, 2 1/2¢ 3¢; sheep-skins, 50¢ 60¢ 75¢ each; bulls, and stag grubby hides 1/2¢ off.

APPLES.—Quoted at \$3 04 50¢ per bushel, as to quality. Supply liberal.

PLUMS.—Quoted at \$0 27 per stand or \$2 50¢ per quart case for Wild Goose, the only kind in market except Californian.

RASPBERRIES.—Cases of 2 bu, quoted at \$2 for black and \$2 00 50¢ for red. The cool weather shut off the demand for the past few days.

STRAWBERRIES.—Season over, and none offering.

GOOSEBERRIES.—Common offered at \$3 04 50¢ and Mammoth \$5 00 25¢ stand. The supply about equal to the demand.

HUCKLEBERRIES.—Light arrival and market firm at \$2 50¢ 75¢ per 16 quart case.

POULTRY.—Live, quoted as follows:

Chickens, 9 1/2¢ 10¢ doz.; roasters, 5¢ turkeys, 10¢; ducks, 6 1/2¢; spring chickens, 10¢ 12¢. Per pair, pigeons, 25¢. The market is firm at quotations.

EALY VEGETABLES.—Dealers are selling at the following range of prices:

Tomatoes 60¢ 75¢ 9¢ 1/2¢ box. Cucumbers, 25¢ 30¢ 35¢ doz. Radishes, 25¢ 30¢ doz. bunches. Onions, 25¢ 30¢ doz. Wax beans, \$1 25¢ 15¢ bu. Cabbages, \$2 00 25¢ 25¢ 2 bu. crate. Green peas, \$5 00 25¢ per lb. Celery, 25¢ per doz. bunches.

WATERMELONS.—Quoted at \$20 00 25¢ 100. Demand only fair.

HOPS.—State nominal at \$2 10¢ 12¢ doz.; New York, 15¢ 16¢. Washington Territory, 13¢ 15¢; Bavarian, 20¢ 27¢; Bohemian, 25¢ 30¢.

CHERRIES.—Sour quoted at \$3 00 25¢ 75¢ bu; no sweet in market.

CURRENTS.—Offered at \$2 00 25¢ 30¢ bu. Supply good.

CIDER.—Common, 8 1/2¢, and clarified, 10 1/2¢ 11¢ gal.

PROVISIONS.—Barreled pork steady; smoked active, and hams and shoulders higher; lard unchanged. Quotations here are as follows:

Hams, new..... 14 25 14 50 Family..... 15 25 15 75 Short clear..... 16 00 16 25

Lard in stores, 7 1/2¢ 8¢ 9¢ 10¢ 11¢ 12¢ 13¢ 14¢ 15¢ 16¢ 17¢ 18¢ 19¢ 20¢ 21¢ 22¢ 23¢ 24¢ 25¢ 26¢ 27¢ 28¢ 29¢ 30¢ 31¢ 32¢ 33¢ 34¢ 35¢ 36¢ 37¢ 38¢ 39¢ 40¢ 41¢ 42¢ 43¢ 44¢ 45¢ 46¢ 47¢ 48¢ 49¢ 50¢ 51¢ 52¢ 53¢ 54¢ 55¢ 56¢ 57¢ 58¢ 59¢ 60¢ 61¢ 62¢ 63¢ 64¢ 65¢ 66¢ 67¢ 68¢ 69¢ 70¢ 71¢ 72¢ 73¢ 74¢ 75¢ 76¢ 77¢ 78¢ 79¢ 80¢ 81¢ 82¢ 83¢ 84¢ 85¢ 86¢ 87¢ 88¢ 89¢ 90¢ 91¢ 92¢ 93¢ 94¢ 95¢ 96¢ 97¢ 98¢ 99¢ 100¢ 101¢ 102¢ 103¢ 104¢ 105¢ 106¢ 107¢ 108¢ 109¢ 110¢ 111¢ 112¢ 113¢ 114¢ 115¢ 116¢ 117¢ 118¢ 119¢ 120¢ 121¢ 122¢ 123¢ 124¢ 125¢ 126¢ 127¢ 128¢ 129¢ 130¢ 131¢ 132¢ 133¢ 134¢ 135¢ 136¢ 137¢ 138¢ 139¢ 140¢ 141¢ 142¢ 143¢ 144¢ 145¢ 146¢ 147¢ 148¢ 149¢ 150¢ 151¢ 152¢ 153¢ 154¢ 155¢ 156¢ 157¢ 158¢ 159¢ 160¢ 161¢ 162¢ 163¢ 164¢ 165¢ 166¢ 167¢ 168¢ 169¢ 170¢ 171¢ 172¢ 173¢ 174¢ 175¢ 176¢ 177¢ 178¢ 179¢ 180¢ 181¢ 182¢ 183¢ 184¢ 185¢ 186¢ 187¢ 188¢ 189¢ 190¢ 191¢ 192¢ 193¢ 194¢ 195¢ 196¢ 197¢ 198¢ 199¢ 200¢ 201¢ 202¢ 203¢ 204¢ 205¢ 206¢ 207¢ 208¢ 209¢ 210¢ 211¢ 212¢ 213¢ 214¢ 215¢ 216¢ 217¢ 218¢ 219¢ 220¢ 221¢ 222¢ 223¢ 224¢ 225¢ 226¢ 227¢ 228¢ 229¢ 230¢ 231¢ 232¢ 233¢ 234¢ 235¢ 236¢ 237¢ 238¢ 239¢ 240¢ 241¢ 242¢ 243¢ 244¢ 245¢ 246¢ 247¢ 248¢ 249¢ 250¢ 251¢ 252¢ 253¢ 254¢ 255¢ 256¢ 257¢ 258¢ 259¢ 260¢ 261¢ 262¢ 263¢ 264¢ 265¢ 266¢ 267¢ 268¢ 269¢ 270¢ 271¢ 272¢ 273¢ 274¢ 275¢ 276¢ 277¢ 278¢ 279¢ 280¢ 281¢ 282¢ 283¢ 284¢ 285¢ 286¢ 287¢ 288¢ 289¢ 290¢ 291¢ 292¢ 293¢ 294¢ 295¢ 296¢ 297¢ 298¢ 299¢ 290¢ 291¢ 292¢ 293¢ 294¢ 295¢ 296¢ 297¢ 298¢ 299¢ 300¢ 301¢ 302¢ 303¢ 304¢ 305¢ 306¢ 307¢ 308¢ 309¢ 310¢ 311¢ 312¢ 313¢ 314¢ 315¢ 316¢ 317¢ 318¢ 319¢ 320¢ 321¢ 322¢ 323¢ 324¢ 325¢ 326¢ 327¢ 328¢ 329¢ 330¢ 331¢ 332¢ 333¢ 334¢ 335¢ 336¢ 337¢ 338¢ 339¢ 330¢ 331¢ 332¢ 333¢ 334¢ 335¢ 336¢ 337¢ 338¢ 339¢ 340¢ 341¢ 342¢ 343¢ 344¢ 345¢ 346¢ 347¢ 348¢ 349¢ 340¢ 341¢ 342¢ 343¢ 344¢ 345¢ 346¢ 347¢ 348¢ 349¢ 350¢ 351¢ 352¢ 353¢ 354¢ 355¢ 356¢ 357¢ 358¢ 359¢ 350¢ 351¢ 352¢ 353¢ 354¢ 355¢ 356¢ 357¢ 358¢ 359¢ 360¢ 361¢ 362¢ 363¢ 364¢ 365¢ 366¢